

CLAIMS

1. A lithographic projection apparatus comprising:
a radiation system to supply a projection beam of electromagnetic
5 radiation having a wavelength of 250nm or less;
a support structure adapted to support patterning structure which can be used to pattern
the projection beam according to a desired pattern;
a substrate table to hold a substrate;
a projection system to project the patterned beam onto a target portion of the
10 substrate; and
a gas supply constructed and arranged to supply a purge gas to a space in said
apparatus, said space containing an optical component, wherein said purge gas comprises an
oxygen-containing species selected from water, nitrogen oxide and oxygen-containing
hydrocarbons.
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2. An apparatus according to claim 1, wherein said purge gas comprises an inert gas,
and wherein the total amount of oxygen-containing species present in said purge gas is from 1
ppb to 10 ppm by volume.
- 20 3. An apparatus as in claim 2, wherein the inert gas comprises helium, argon, nitrogen
or a mixture thereof.
4. An apparatus according to claim 1, wherein said oxygen-containing species is
selected from water, nitrogen oxide, alcohols, alkanones and ethers.
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5. An apparatus according to claim 1, wherein said space is substantially evacuated, and
wherein a total partial pressure of the oxygen-containing species in said space is from 1×10^{-4}
Pa to 1 Pa.
- 30 6. An apparatus according to claim 1, which apparatus further comprises a further
supply of electromagnetic radiation having a wavelength of 250nm or less and arranged to
supply such radiation onto at least one of said optical component and said patterning structure.

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cleaning an optical component for use in the apparatus by irradiating a space containing said optical component with radiation having a wavelength of less than 250 nm in the presence of an oxygen-containing species selected from water, nitrogen oxide and oxygen-containing hydrocarbons.

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A device manufactured according to the method of claim 7.

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